USING ONLINE LEARNING PLATFORMS TO ENHANCE STUDENTS' REFLECTIVE AND CRITICAL THINKING

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ABSTRACT

A working paper on how to use common E-Learning platforms to incorporate critical thinking and reflection into traditional and hybrid formatted curriculums. Definitions and conceptual framework of both constructs are discussed and their benefits towards cognitions and reflection are highlighted. Best practices, including examples of previous courses are presented as well as the pedagogy and planning necessary for readers to implement successfully into their own courses. Paper also includes strategies and techniques for possible use.

Keywords: Critical Thinking, Meta-Cognition, Reflection, E-Learning, Hybrid curriculums.

INTRODUCTION

The Internet, and its subsequent applications, enables educators a myriad of powerful tools with a nearly limitless flexibility of resources available for their use. This is no longer limited to information as the developments of pedagogical tools have impacted classrooms, blurring the distinctions of traditional instructional settings and types. And these options continue to grow and develop. As the Internet matures so do the constructs that have been developed within it as well as those 'outside' its purview but use it as a form of medium or communication. Typically referred to as platforms, these systems use the Internet as a channel, or communication forum to expand the capabilities and options of the learning resources available within the network (Garcia & Jorge, 2006). In terms of learning this may be the most exciting venue of the World Wide Web and its seemingly endless possibilities; possibilities nearly guaranteed to develop even more powerful and useful tools and resources in the future.

This was not always the case as the Internet, at least towards education, was originally used as an archive where users simply accessed what others had already written. The concept is similar to digital libraries seen today. Originally this 'communication' was one way and, for the most part, static, as a teacher or student could only access a web site to view information. Websites were developed by experts and designed primarily as a 'viewing' medium. This is a passive form of information which limited educational uses to simple referencing and cataloguing. Both are lower functioning cognitive skills and though important do not address critical thinking and reflective practices. These can be difficult to implement successfully but are critical in developing metacognition and other similar, high functioning cognitive processes. All this has changed however, with the development of Learning Management Systems (LMS) that are interactive and offer more active constructs and resources then the first generation Internet applications.

There is a wide variance in what an LMS can offer to the teacher however, and the term still develops debate as to what it really means (Martin, Martinez, Revilla, Aguilar, Santos, & Boticaro, 2008 & Ellen, 2010). The same is true for "e-learning platforms' which is another generic, all inclusive term for an educational product developed or used through the Internet (Garcia & Jorge, 2006). What they are exactly depends upon the context and application in which they are used. It is the SCORM (Sharable Content Object Reference Model) platforms that allow these components to link up as parts of a larger, more comprehensive service or product; creating a powerful, yet easy enough platform that novices or non-experts can use (Garcia & Jorge, 2006). This is important as these must be adaptable and easy for both the teachers and their students to be able to use. By doing so, the Virtual Learning Environment (VLE) becomes transparent, allowing for clear transmission of the message and content of the course,

which in some modalities may have been obscured by the technical limitations and barriers of earlier, limited interfaces (Garcia & Jorge, 2006; Rothery, 2004 & White Paper, n.d.). SCORM allows for the development of multiple user platforms that run in or near real time, allowing for a more interactive VLE and a more robust learning experience. Through SCORM and similar models, e-Learning now has the capability to extend reflective and critical thinking into the realm of distance learning.

These same resources can be utilized within a traditional classroom as well, usually with significant results. Commonly referred to as hybrid or 'blended curriculums', an instructor can utilize LMS packages or services to maximize the benefits of both types. Possibly the strongest benefit of this blending is in allowing the instructor to harmonize the active and interactive component(s) between him and the students, referred to as 'face time', which is an issue commonly seen as a detriment in online courses. The teacher can also develop peer to peer or student to student involvement, also a criticism of distance learning, while at the same time allowing for the autonomous, singular student time necessary for reflection and metacognitive (critical) thinking (Smith, Rook & Smith, 2007 & Rabe-Hemp, Woollen & Humiston, 2009). If done correctly the teacher can create, for all intents and purposes, the best of all worlds; the creation of multiple learning environments optimal to just about any student, assessment and/or task.

Learning Theories

To understand this it is best to develop the basic constructs of teaching itself, specifically in the contexts of the different applications as discussed in this article. Structured learning theories are divided into taxonomical sub-sets or types, usually defined as student led, teacher led or the epistemology of the learning itself (Mödritscher, 2006 & Pillow, 2008). It can be argued that traditional classrooms are dominated by teacher led philosophies or theories while online courses are predominantly student led. The very nature of online courses determines this, as the lack of real time, personal involvement by the instructor minimizes most, if not all, teacher influences. However, these students are probably more autonomous and self directed than their peers in regular classes, traits commonly associated to critical thinking and reflection (Rabe-Hemp, Woollen & Humiston, 2009). Yet student interactions with others, primarily with that of the teacher, will help develop a stronger, more personal and direct relationship also beneficial to learning. The difference, quite simply, is in what is being taught and how. This is why blended curriculums can maximize the benefits of both.

In the epistemological, or psychology based taxonomy group there exists several constructs favoring a specific type or focus of learning. On the one end of the spectrum is the behaviorist approach or theory. This concept looks at learning through a teacher centered focus, where knowledge is broken into small, easy to memorize parts called schemas, reinforced by repetition and lower level cognitive instruction. This style tends to be rigid and structured and will be focused on "basic concepts, skills, and factual information [which] can rapidly be acquired by the learners" (Mödritscher, 2006, p. 5). Traditional classes are dominated by this paradigm and rightly so. For knowledge to be active and continuous, structured learning and understanding must be in place. It is also assumed that a level of growth and maturity must first be obtained (Pillow, 2008). In education, this is sometimes referred to as scaffolding, best conceptualized through the metaphor of the building of a wall or structure (Bean & Stevens, 2002). For each level of bricks, which represent a piece of knowledge (schema), to be placed there must be an earlier, stable and set level upon which these new bricks must rest. In schema and behaviorist theory, knowledge is best taught though simplistic and repetitive steps.

However, for constructivists and cognitivists the wall and foundation are just the beginning, it is the abstract 'roof' where reflection and critical thinking occurs. Constructivists are at the other end of the spectrum from behaviorists and tend to see learning from a student centered perspective. Knowledge is best acquired through collaboration and community, where students can learn from the other. This also facilitates knowledge acquisition in directions possibly not seen or designed by the instructor. Though unforeseen, it is not unwarranted or discouraged as these 'out of the box' discussions can develop multiple perspectives of inquiry,

stronger reflective practices and deeper critical thinking skills (Mödritscher, 2006; Smith, Rook & Smith, 2007; McLoughlin & Mynard, 2009). Cognitivists fall somewhere between the two and are defined by practitioners who use differing, multiple practices to develop and enhance the student's overall learning. Instructors from this perspective will tie in schema theory and behaviorist learning with examples and reflective practices to 'induce' deeper, critical and higher cognitive thinking. They will incorporate multiple components or constructs of critical thinking to synthesize a learning paradigm that meets students' individual learning styles while, at the same time, develop communities to foster optimal learning (Mödritscher, 2006). Hybrid or blended curriculums are perfect mediums for integrating this theory into practice.

Critical and Higher Thinking

There is historical precedence to thinking styles or types considered as 'critical' or higher order. The famous Greek philosophers Socrates and Plato, referred to as classical philosophy or philosophical style, questioned their surroundings and perceptions of reality. Influential eastern philosophers, such as Confucius and his predecessor, Wang Chong, took a culturally different approach in that people needed to critically examine their role and purpose in governance, morality, and in society. Later, influential thinkers such as Thomas Aquinas, Francis Bacon, Descartes and Thomas Moore, to name a few, expounded their views or ideas of reflective or critical thinking (The Foundation for Critical Thinking, 2009). Based in philosophical and historical roots, modern concepts of critical thinking have expanded into the fields of psychology and sociology as contemporary theorists develop new understandings of human thought and thinking.

Though there is no universal rule or definition of what constitutes critical thinking there have been attempts to clarify what it may be or how it can be applied or harnessed (Fisher, 2001). John Dewey, an American philosopher and influential pioneer of the progressive movement in education, listed it as 'reflective thinking' and was one of the earliest proponents of its use in the teaching of children (Foundation for Critical Thinking, 2009: Fisher, 2009). He referred to it as an "active, persistent, and careful consideration of a belief or supposed form of knowledge". in constructing or defining an answer, conclusion or corollary question or statement (Dewey, 1909, P. 9). Edward Glaser, later delineated his definition to three concepts:

> *(i) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come withinthe range of one's experiences, (ii) knowledge of the methods of logical inquiry and reasoning, and (iii) some skill in applying those methods. Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends. (1941, pp. 5-6).*

A Modern interpretation from Richard Paul, director of Research at the Center for Critical Thinking, states that it is "thinking that analyzes thought, that assesses thought, and that transforms thought for the better (2007, p. 1).

Several definitions describe some form of reflective thought as a means to initiate higher thinking. Reflection in itself is defined as "consideration of some subject matter, idea, or purpose" or in "a thought, idea, or opinion formed or a remark made as a result of meditation" (Mirriam-Webster, 2010). As a process it is relatively nebulous and undefined; reflection without purpose or structure may not develop critical thinking on its own. Yet, its development in a harnessed forum or activity may illicit strong cognitive skills. Robert Ennis, a leading scholar in the field, described critical thought as "reasonable, reflective thinking that is focused on deciding what to believe or what to do". Interestingly, this also associates with the cognitive theory of metacognition (Ennis & Norris, 1989, P.3). Usually referred to as simply "thinking about thinking", metacognition can be described as a reflective strategy of analysis, usually of a cognitive outcome or process (Livingston, 1997, p. 1). This can be especially powerful if such reflection is successfully undertaken after a failed, or faltering, thinking or belief has occurred. This 'cognitive dissonance' as coined by Leon Festinger in 1957, arises when differing beliefs or thoughts come into play within one's mind. A person will need to rationalize the two, dismiss one of them, or make some form of accommodation as the dissonance causes discomfort and anxiety (Atherton, 2010). As the person

reflects and develops new beliefs and/or ideas then reflection is entering into a metacognitive state or a higher critical thinking skill is being used.

Outliers which also may play roles in cognitive skills are the correlating theories of moral development and of social learning. Moral roles and structures are developed early in childhood and can be influential in learning, especially in regards to metacognition and cognitive dissonance. The famous psychiatrist Jean Piaget referred to these in his processes of accommodation and assimilation. As children we absorb normative behaviors and social constructs as we grow and learn. Occasionally a type of 'disconnect' to the knowledge structures in our brain occurs and when this happens we have to shift our beliefs or thinking to accommodate this change. According to Piaget, this adaptability is driven by a need for an equilibrium of our internal state of mind to our external perceptions (Bhattacharya.& Han, 2001; Nucci, 2008). Similar to the dissonance, an individual will try to harmonize the discord, possibly developing critical thinking skills in doing so. Lawrence Kohlberg would later extend Piaget's theory, advocating development through the use of a moral quandary or a koan that would force students to think through moral contradictions of what is right and what is wrong to reach equilibrium (Nucci, 2008). One of his most famous quandaries was the Heinz dilemma, where a man whose wife was dying needed a rare, expensive medicine that only one pharmacist in town possessed. He couldn't afford it and the pharmacist was not accommodating in reaching an affordable price. The students were then asked to what they thought the husband should do and if they believed the action was right or wrong (Crain, 1985).

Robert Sternberg, who was also influenced by Piaget, combined the moral constructs developed through childhood with components of critical theory and of sociological domains in his Triarchic Theory of Intelligence. This theory consists of three interconnected domains which work together to form intelligence. The first, labeled 'componential' is described as a series of 'metacomponents' which correlate to cognitive processes or traits as referred to in other theories. The second domain, referred to as 'experiential' develops constructs of moral theory and learning while the third, 'contextual' refers to the social context or conditions in which the individual develops and/or resides within. According to Sternberg, it is all three, working in overlapping ways that develops a person's intelligence, expressed through analytical, creative or practical skills (Plucker, 2003; Kearsley, 2010).

One of the most successful cognitive theories also utilizes multiple domains though it is the cognitive construct that is used, or most commonly referred to (Table 1). Bloom's Taxonomy, developed by Benjamin Bloom, and first published in 1956, utilizes three domains; cognitive, affective and psychomotor. Similar to Sternberg's Intelligence theory, Bloom's involved an emotional construct though the two differ in using social domains. Another difference was that Bloom established the steps or scales in ascending order of 'higher power' or influence (Bloom, 1956; Forehand, 2005). The difference in the scaffolding was influential in a practicum way for educators as they could easily apply it in their instruction as the taxonomy integrates well with different instructional philosophies and styles. It also allows for the development of reflective and metacognitive practices through the use of practical verb sets that clarify the step or stage of cognition (Bloom, 1956). The taxonomy has established itself, through time, as one of the more versatile and practical cognitive theories and one that most educators are at least somewhat versed in using.

Developing the Hybrid Platform

If the curriculum has already been taught before or is somewhat complete, the instructor will need to define what he or she wants to accomplish by using a blended curriculum. At this point he will need to decide on what should be loaded online and what should remain. If starting from scratch it may be best to do it the other way around; load everything into the e-platform then decide what should be 'brought out' for the traditional classroom. A nice little caveat to online platforms is that many offer migration services from semester to semester. Though there are sometimes issues (usually old assignment due dates) the migration offers a nice, continuous service for notes, lectures and pertinent class documentation. Quite simply, it serves as a nice back up for all the author's course files.

Whether or not an assignment will be used in the next term is inconsequential, it can be made visible or not at his discretion, yet it remains, waiting to be used and barring a catastrophe will remain so. If not sure when planning then it is suggested to load everything into the E-platform; redundancy in education is never a problem or an issue, losing stuff is. Over time and experience the author have come to use the VLS even when teaching in the classroom, accessing the activity on the class computer and projecting it through the digital projector. If the Internet is slow or down, then the flash drive becomes the backup as its plug and play capabilities can easily be used on most of the university's computers. Interestingly enough, it used to be the other way around but the author now use the e-platform as the primary resource and his flash drive as the backup. This is just one example of how useful this service has become.

The most powerful resource or benefit of using a VLS is the capacity to extend the classroom beyond its original scope. With the proper use of blended curriculums the course is not limited to a room or a set time and unlike an online course, there is still the teacher to class dynamic in developing the learning structures needed for some students to succeed. The class time develops the social models of instruction while the VLS can offer both the lower cognitive duties such as note taking and comprehension as well as the higher, critical thinking extension activities. It is recommended for an instructor to start with note archival first, however and then develop higher cognitive activities later. In a university setting most low functioning cognitive activities can be relegated outside of the classroom schedule. This, of course, will be determined by the type of course being taught and if the instructor is comfortable with delegating core components of the curriculum to an autonomous, out of one's control style. However, this is how true online courses are developed and once at ease with the concept, many instructors may relish the freedom from lecturing the same salient points repeatedly from course to course. The important development of critical thinking and reflection should be developed over time and in conjunction with classroom activities; if not developed properly or "without adequate guidance, students may see the process as yet another classroom ritual and treat it in a cursory fashion", without much thought or precision to it (Bean & Stevens, 2002, p. 206). Not just any prompt or question will work, to be truly effective the instructor will need to develop the activity with a certain level of precision and insight.

It is in the form of questioning that will develop, or at least initiate the development of critical thinking processes of the class and the individuals within it (Bean & Stevens, 2002 & Smith, Rook & Smith, 2007 & Yang & Chou, 2008). The distinction is important as group constructs and individual beliefs can be utilized by class and online discussions to probe and clarify critical reflection and thoughts. Developing this, however, isn't easy and will require patience and a willingness of the instructor to develop effective processes over time. Most educators are versed in only lower level questioning any way, primarily those involved with basic knowledge and comprehension (Smith, Rook & Smith, 2007). To extend their own thinking, not to mention that of their students, teachers will need to engage in active and critical thinking of their own. For critical thinking and/or metacognition to occur the individual must be engaged in a stimulating, but non-threatening discussion or activity which forces them to think outside their normal confines of thought and expectations (Smith, Rook & Smith, 2007). Social constructs of groups, including norms, ideals or standards could be utilized through classroom discussions and then particular emphasis on individual thoughts and beliefs can be developed by the online tools following the class activity. This deconstruction of group social constructs and normative behaviors down to the individual's belief systems and thought processes allows for a contrast and comparative analysis of different social constructs which are usually understood by all but shared or seen unequally. Even a young adult or child can reason through social differences and individual concepts but in doing so stimulates the higher order thinking levels of synthesis and evaluation while incorporating both critical analysis and reflections (Bloom, 1956 & Kuhn, 2000).

To begin, the instructor should plan for a discussion on a topic that will engage or stimulate the group or majority of the students within the class (Table 2). This will, of course, be

determined, in part, by the content of the course. The author usually use a current controversial issue in education. Previous topics have included religion in education, dress codes, zero tolerance policies and race relations, to name just a few. Actual engagement is not necessary, students will be active or passive participants but all should be paying attention. Afterwards a question should be posted in an online forum created for the specific topic, commonly referred to as a thread. These should be developed in conjunction with the class discussion, activated when time to do so and closed when finished. The students must answer this prompt in some way (as defined by the instructor) either as a beginning topic in the thread or in continuing, validating or refuting another point made by a peer. It is important that the instructor makes it clear that expectations of decorum and proper, courteous exchanges need to be followed. Any inflammatory or derogatory comments should be censored and grades withheld or penalized. This will create a culture where divergent discussions and views will be generated and expressed freely (at least it is hoped), allowing for a community where contrasting and different views are expressed in an open and semi-autonomous environment. The differences in these exchanges, in the classroom and online, should illustrate different social constructs, normative behaviors and other variables not normally seen or experienced by the students. It will also allow some students, uncomfortable with open dialogues and exchanges in classroom settings to participate in a less threatening forum. As the instructor develops his or her own knowledge and awareness of these activities and constructs, different prompts and questions can be utilized to elicit further deeper and reflective thinking from the students.

The final step involves individual students to follow up with a written assignment further clarifying their views. This comes last and needs to follow the classroom discussion and online thread once the two have been fully developed and discussed. Here the prompt or question is for the individual to cognitively develop or analyze the convergent and different concepts he or she may have witnessed or heard. There should be no right or wrong in response to this activity and the teacher should only comment on the writing, or lack thereof, of the student's response. The author have commented, in the past, for students to reflect further and given prompts on how to do so but never used points or grades to enhance this decision. Normally if the assignment is done the student receives a full grade with just suggestions for improvement. This activity can be submitted via the online submission system of the LMS which keeps it private and eases grading.

Examples and Best Practices

An interesting example of this process occurred in the spring of 2010 in the author's Current Educational Issues class, a graduate level course. The students were a mixture of both veteran teachers, with varying years of experience, and pre-service, non-traditional students with no experience at all. The diversity, both of knowledge and contrasting viewpoints was intriguing, and the discussions, both in the classroom and online, were rich and well developed. In this course (and in subsequent others), one of the most animated topics was that of privacy, most notably in online social forums such as Facebook. Many public institutions, primarily k-12 schools in the United States, have been critical of teachers engaged in these sites. It appeared, at least from the perspective of my students that a cultural rift existed between the younger and older generations concerning the appropriate use of these forums. Possibly acerbated by the eclectic moral norms a public school engenders many of the students were at a loss to understand the opposing viewpoints to their own expectations and/or norms of behavior. Many found these outlets to be as much a 'right' as going out into public venues or when meeting others in an open environment, which the opposing viewpoint saw as the more traditional norm or behavior. It was this clash of expectations and cultures which created a ripe and fertile area to illicit cognitive and reflective practices.

Started within the traditional classroom setting, the students were required to read a short news article of a teacher recently (at that time) disciplined for behavior deemed irresponsible on another's Facebook page. The discussion, started once everybody was done reading, was initiated with the verbal question asked to the class as a group; 'are there fair or unfair expectations or limits assigned to

teachers in regards to their privacy?' The question is vague, and non-directional, asked to no one in particular. As the conversation commenced, certain key or loci statements were looked for, in guiding or developing the discussion along pre-determined or planned routes of exploration. Eventually the concepts of fair and unfair were brought up, of which the author responded with the question of; 'what determines fair?' This was also designed to garner responses from both the veteran teachers and those not accustomed to the education profession. As shown in Table 1, this is an evaluation construct, one of the higher order cognitive processes as defined by Bloom. Following the class each individual was then directed to post their interpretation of the class discussion on the online discussion board. By doing this the author allowed those more passive in the classroom dialogue to engage in an online forum where they may have felt more secure. All twenty one of the students followed through with this activity and more than half continued the thread with a subsequent discussion beyond the parameters of the assignment Further questions and prompts were also developed in the chat 'room' or 'board' where threads and correlated strands of the prompt continued solely through student engagement. Finally, all the students wrote a short, narrative assignment of their views and opinions of the discussion, as well as the contrasting views (whatever that may have been) which was submitted through the online submission portal of the institution's LMS.

Questioning, as can be seen from the previous example, is important in successfully developing both critical thinking and reflection. In determining the types of questions to use, the instructor has several formats or concepts available to him. One promising style is that of the scientific or Socratic technique. These questions ask

- for clarification of the problem,
- to probe assumptions and beliefs of the individual,
- to probe reasons and evidence given,
- to discern viewpoints or perspectives,
- to probe future implications or consequences or
- to question the questions themselves (Yang & Chou, 2008).

Another route for question development can be through critical thinking similar to that of Bloom's Taxonomy. This incorporates questions that involve problems or issues through (i) identification (ii) definition, (iii) exploration, (iv) evaluation and (v) integration (Wickersham & Dooley, 2006). Either style or type is valid and there are many more from which to choose from. One can simply create their own or pull appropriate verbs from the Bloom's Taxonomy table (Table 1). The instructor should expect some fluidity, however, in developing the right questions and prompts and only by trying different ones will he or she know what will work and what won't. One will have to experiment to be sure and be ready if issues or problems develop. This also pertains to the documents, handouts and all other constructs developed for the activity. Getting students to think and then to reflect (and write) is not an easy accomplishment and can be problematic and messy. The tools necessary to do so will also need constant

Bloom's Taxonomy

	Construct	Basic Terminology	Descriptor Verbs
Lower order	Knowledge	Memorization of facts, classifications and categories	Defines, identifies, lists, names, selects
↑	Comprehension	Understanding the meaning of knowledge	Explains, generalizes, restates, understands
↑	Application	Using old information in new and different ways (applications)	Applies, relates, constructs, extends
↑	Analysis	Breaking down of information and examining - making inferences	Analyses, compares, infers, prioritizes
↑	Synthesis	Applying knowledge and skills to create a new concept (construct)	Adapts, designs, develops, plans
Higher order	Evaluation	Judging and interpreting based on personal value sets (beliefs)	Appraises, critiques, judges, justifies

Sometimes considered equal in order

Table 1. Bloom's Taxonomy of Thinking

modification and adjustment. This is not only true in achieving the initial goal of metacognition but even more so in optimizing the levels of thinking. Just getting the students to do it is not enough, for true higher thinking to occur they must delve deeper than they normally have, or necessarily want to do; only then have they truly 'learned'. One way or style will probably not always develop this thought process and even if a technique works, it will not always do so with different students and in different classes. However the steps outlined in Table 2 can be a useful template or guide in the development of a critical thought process activity in a curriculum. It should be a good start for practitioners willing to try.

Activity	Type	Explanation
Develop the topic	Regular classroom	A. Develop a discussion topic or controversial issue to be discussed
		B. Prepare salient points to cover
		C. Monitor discussion
Discussion (cont.)	Online	Note - most LMS platforms have a discussion forum or category
		A. Set up the thread and topic
		B. Develop a rubric for students to know what is expected
		I. Each student must respond at least once on the thread
		II. This can be a new concept or in response to another idea
		III. Thread should be public to all and monitored
		IV. Stress for accommodation of opposing viewpoints and establish penalties for infractions
Chat	Online	Optional - used to create a friendly environment to develop online communities
		A. Encourage students to use this for assistance from each other, help or miscellaneous services
		I. Use this for students who miss time in class they can come here for help II. Extend extra points for using it III. Use this to drop 'hints' about upcoming assignments and potential exam questions
Reflection	Online	Journal entry that is submitted to the instructor following the classroom and online discussion threads
		A. Developed using questions or prompts based on higher level thinking
		I. Follow Bloom's Taxonomy or other critical thinking tools II. See Table 1
		B. Use a planned, prepared outline or assessment sheet -helps if each question looks the same
		I. Consistency II. Assists in grading -helps students know what is expected
		C. Needs to be completed as an individual assignment, based on reflections from discussions
		I. Use a rubric to grade II. Needs to be confidential III. Only grade and comment on writing, expression, etc. I.no personal thoughts, bias or other allowed
		D. Submit through the online submission box by a pre-set date

Table 2 . Steps in Creating Critical and Reflecting Thinking through a Blended/Hybrid Curriculum

Though conceived in simplistic terms within this paper, the development of deep reflection and thought processes can be implemented through the use of online VLS platforms with little advance training or knowledge. Hybrid classes utilize the strengths of both traditional and online styles of instruction, and if planned properly, can limit most of their weaknesses. This allows an instructor to free up time to do more creative, engaged practices where critical thinking and reflection can be initiated. Though impossible to assess, these cognitive activities are considered extremely beneficial for students to learn and to develop but are considered very difficult by educators in achieving. By using blended curriculums an instructor can develop the cultures and tools necessary to develop such thinking constructs and in doing so will add other benefits such as time allocation, extra resource and flexibility in use and location. In some respects it is a simple choice for many educators to use and one this author has no regrets in doing.

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